

CLAIMS

What is Claimed is:

- 1 1. A method of executing a remote procedure (214) in a remote processor
2 (220) from a client process (204) executed in a local processor (218), comprising the
3 steps of:
4 accepting a remote procedure call identifying the remote procedure (214)
5 including a global remote procedure locator;
6 translating the remote procedure call into a CGI-compatible information transfer
7 protocol;
8 transmitting the translated remote procedure call to the remote processor (220);
9 interpreting the translated remote procedure call into a remote procedure-
10 compatible format; and
11 invoking the remote procedure (214) in the remote processor (220).
- 1 2. The method of claim 1, wherein the remote procedure call further
2 comprises a remote procedure input value and the remote procedure is invoked to produce
3 at least one remote procedure output value from the remote procedure input value
- 1 3. The method of claim 2, further comprising the steps of:
2 translating a remote procedure response having the remote procedure output value
3 into the CGI-compatible information transfer protocol;
4 transmitting the remote procedure response to the local processor (218);
5 interpreting the remote procedure response to a client process-compatible format;
6 and
7 providing the translated remote procedure response to the client process (204).
- 1 4. The method of claim 2, wherein the global remote procedure locator is a
2 universal resource locator (URL).

1 5. The method of claim 2, wherein the CGI-compatible information transfer
2 protocol is a hypertext transfer protocol (HTTP).

1 6. The method of claim 2, wherein the translated remote procedure call is
2 transmitted to the remote process via the Internet.

1 7. The method of claim 2, wherein the remote procedure call is translated
2 into a CGI-compatible information transfer protocol via a first application program
3 interface (API), and the translated remote procedure call is interpreted by a second
4 application program interface (API).

1 8. A method of executing a remote procedure (214) in a remote processor
2 (220) from a client process (204) executed in a local processor (218), comprising the
3 steps of:
4 accepting a remote procedure call having information identifying the remote
5 procedure (214) including a global remote procedure locator;
6 translating the remote procedure call into a CGI-compatible information transfer
7 protocol;
8 transmitting the translated remote procedure call to the remote processor (220);
9 and
10 receiving a remote procedure response at the local processor (218).

1 9. The method of claim 8, wherein the remote procedure call further
2 comprises a remote procedure input value, and the remote procedure response comprises
3 a remote procedure output value generated by invoking the remote procedure.

1 10. The method of claim 9, wherein the global remote procedure locator is a
2 universal resource locator (URL).

1 11. The method of claim 9, wherein the CGI-compatible information transfer
2 protocol is a hypertext transfer protocol.

1 12. The method of claim 9, wherein the translated remote procedure call is
2 transmitted to the remote processor (220) via the Internet.

1 13. A method of executing a remote procedure (214) from a client process
2 (204) executed in a local processor (218), comprising the steps of:
3 accepting a remote procedure call, the remote procedure call transmitted in a CGI-
4 compatible information transfer protocol, the remote procedure call having information
5 identifying the remote procedure (214) including a global remote procedure locator;
6 interpreting the remote procedure call into a remote procedure-compliant format;
7 and
8 invoking the remote procedure (214) in the remote processor (220).

1 14. The method of claim 13, wherein the remote procedure call comprises at
2 least one remote procedure input value, and the remote procedure is invoked to produce at
3 least one remote procedure output value from the remote procedure input value.

1 15. The method of claim 14, further comprising the steps of:
2 interpreting a remote procedure response to have the remote procedure output
3 comply with the CGI-compatible information transfer protocol; and
4 transmitting the remote procedure response so that the remote procedure output
5 value becomes available to the client process (204).

1 16. The method of claim 14, wherein the remote procedure call is transmitted
2 in a hypertext transfer protocol (HTTP).

1 17. The method of claim 14, wherein the remote procedure call is transmitted
2 via the Internet.

1 18. A gateway for executing a remote procedure (214) in a remote processor
2 (220) from a client process (204) executed in a local processor (218), comprising:
3 a client application program interface (206);
4 for translating a remote procedure call having information identifying the
5 remote procedure (214) including a global remote procedure locator into a CGI-
6 compatible information transfer protocol, for transmitting the translated remote procedure
7 call to the remote processor (220), and for interpreting a remote procedure response into a
8 client process-compatible format;
9 an agent application program interface (212);
10 for interpreting a remote procedure call translated by the client application
11 program interface (206) into a remote procedure-compatible format, for invoking the
12 remote procedure (214) in the remote processor (220) to produce a remote procedure
13 response, and for translating a remote procedure response into the CGI-compatible
14 information transfer protocol; and
15 wherein the client application program interface (206) is communicatively
16 coupled to the agent application program interface (212).

1 19. The apparatus of claim 18, wherein:
2 the remote procedure call further includes at least one remote procedure input
3 value;
4 the remote procedure response includes at least one remote procedure output
5 value; and
6 the remote procedure is invoked to produce the remote procedure output value
7 from the remote procedure input value.

1 20. The apparatus of claim 19, wherein the global remote procedure locator is
2 a universal resource locator (URL).

1 21. The apparatus of claim 19, wherein CGI-compatible information transfer
2 protocol is a hypertext transfer protocol (HTTP).

1 22. The apparatus of claim 19, wherein the client application program
2 interface (206) is communicatively coupled to the agent application program interface
3 (212) via an Internet connection.

1 23. The apparatus of claim 19, wherein the client application program
2 interface (206) further comprises a stub for accepting the remote procedure call from the
3 client process (204) and for providing the remote procedure response to the client process
4 (204).

1 24. The apparatus of claim 19, wherein the agent application program
2 interface (212) further comprises a shell for providing the interpreted remote procedure
3 call translated by the client application program interface (206) to the remote procedure
4 (214), and for accepting the remote procedure response having the remote procedure
5 output value.

1 25. A gateway for executing a remote procedure (214) in a remote processor
2 (220) from a client process (204) executed in a local processor (218), comprising:
3 a client application program interface (206) for translating a remote procedure call
4 having information identifying the remote procedure (214) including a global remote
5 procedure locator into a CGI- compatible information transfer protocol, for transmitting
6 the translated remote procedure call to the remote processor (220), for interpreting a
7 remote procedure response into a client process-compatible format; and
8 wherein the client application program interface (206) is communicatively
9 coupleable with an agent application program interface (212) for interpreting a remote
10 procedure call translated by the client application program interface (206) into a remote
11 procedure-compatible format, for invoking the remote procedure (214) in the remote
12 processor (220) to produce a remote procedure response; and for translating the remote
13 procedure response into the CGI-compatible information transfer protocol.

1 26. The apparatus of claim 25, wherein:
2 the remote procedure call further includes at least one remote procedure input
3 value;
4 the remote procedure response includes at least one remote procedure output
5 value; and
6 the remote procedure is invoked to produce the remote procedure output value
7 from the remote procedure input value.

1 27. The apparatus of claim 26, wherein the CGI-compatible information
2 transfer protocol is a hypertext transfer protocol (HTTP).

1 28. A gateway for executing a remote procedure in a remote processor (220)
2 from a client process (204) executed in a local processor (218), comprising:
3 an agent application program interface (212) for interpreting a remote procedure
4 call translated by a client application program interface (206) into a remote procedure-
5 compatible format, for invoking the remote procedure (214) in the remote processor (220)
6 to produce a remote procedure response, and for translating a remote procedure response
7 into a CGI-compatible information transfer protocol; and
8 wherein the agent application program interface (212) is communicatively coupled
9 to a client application program interface (206) for translating a remote procedure call
10 having information identifying the remote procedure (214) including a global remote
11 procedure locator into a CGI-compatible information transfer protocol for transmitting the
12 translated remote procedure call to the remote processor (220); and for interpreting a
13 remote procedure response into a client process-compatible format.

1 29. A method of defining a client process (204) having a remote procedure
2 (214) remotely executable in a remote processor (220) from the client process (204)
3 executed in a local processor (218), comprising the steps of:
4 accepting remote procedure definition information including a global remote
5 procedure locator and information identifying the remote procedure (214);
6 compiling a stub for communicating between the client process (204) and a client
7 application program interface (206) (API) from the remote procedure information;
8 compiling a shell for communicating between the remote procedure (214) and an
9 agent API (212) from the remote procedure information;
10 compiling an API procedure from the remote procedure definition information;
11 compiling a client API from the client process (204), the API procedure, and the
12 client stub; and
13 compiling an agent API (212) from the remote procedure (214), the API
14 procedure, and the shell.

1 30. The method of claim 29, wherein the remote procedure definition
2 information further comprises at least one remote procedure input attribute and at least
3 one remote procedure output attribute.

1 31. An apparatus for executing a remote procedure (214) in a remote processor
2 (220) from a client process (204) executed in a local processor (218), comprising:
3 means for accepting a remote procedure call having at least one remote procedure
4 input value, and information identifying the remote procedure (214) including a global
5 remote procedure locator;
6 means for translating the remote procedure call into a CGI-compatible information
7 transfer protocol;
8 means for transmitting the translated remote procedure call to the remote
9 processor (220);
10 means for interpreting the translated remote procedure call into a remote
11 procedure-compatible format; and
12 means for invoking the remote procedure (214) in the remote processor (220) to
13 produce at least one remote procedure output value from the remote procedure input
14 value.

1 32. The apparatus of claim 24, further comprising:
2 means for translating a remote procedure response having the remote procedure
3 output value into the CGI-compatible information transfer protocol;
4 means for transmitting the remote procedure response to the local processor (218);
5 means for interpreting the remote procedure response to a client process-
6 compatible format; and
7 means for providing the translated remote procedure response to the client process
8 (204).

1 33. The apparatus of claim 24, wherein the information identifying the remote
2 procedure (214) further comprises a remote procedure name identifier.

1 34. A program storage device, readable by a computer, tangibly embodying at
2 least one program of instructions executable by the computer to perform method steps of
3 executing a remote procedure (214) in a remote processor (220) from a client process
4 (204) executed in a local processor (218), the method steps comprising the steps of:
5 accepting a remote procedure call identifying the remote procedure (214)
6 including a global remote procedure locator;
7 translating the remote procedure call into a CGI-compatible information transfer
8 protocol;
9 transmitting the translated remote procedure call to the remote processor (220);
10 interpreting the translated remote procedure call into a remote procedure-
11 compatible format; and
12 invoking the remote procedure (214) in the remote processor (220).